

FILE 'HNAME' ENTERED AT 14:56:56 ON 28 OCT 2002

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inventor search

3 citations, RN's were selected from ex. citation

cpds are assigned to each citation; 3 cites w/ 47 cpds displayed

L12, creating a subset in which STR was searched; every cpd in this subset has 1-2 ring system; each cpd must have

NRS = # of rings systems

191 S L17 AND NRS=1

26 S L18 AND "HYDROXYMETHYL"

19 S L19 AND "METHANOL"

48 S L19-20

19 S L20 AND "AMINO"

163 S L17 AND "METHANOL"

70 S L18 AND "ESTER"

96 S L18 AND "ACID"

27 S L25 NOT L24

571 S L17 NOT L18

11 S L16 AND NRS=1

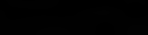
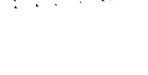
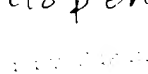
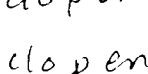
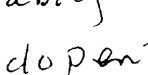
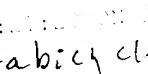
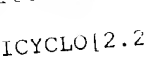
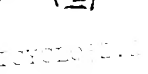
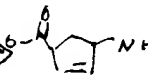
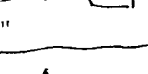
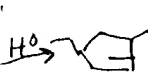
13 S L25 AND "2-AZABICYCLO[2.2.1]HEPT-5-ENE-2-CARBOXYLIC ACID, 3-

7 S L29 AND "ACETYL"

22 S L28 AND "2-AZABICYCLO[2.2.1]HEPT-5-ENE-2-CARBOXYLIC ACID, 3-

18 S L28 NOT L29-31

11 S L27 NOT L28



azabicyclos as reactants

cyclopentenes (II) as products

cyclopentene (II) as reactant

rid = ring identifier

... ..

prep of L

L11-12 AND L13 = III → II
L13-14 AND L15 = II → IV

L16-17 AND L18-19 = ILLUMINATE, I ILLUMINE & ILLUSTRATION
EXHAUST

L20 AND L21-22 } adding in relevant
L23 NOT L24
L25 AND L26-27
L28 AND L29
L30 AND L31
L32 AND L33
RESOLUTION NOT IN

L51 1 S L46 AND L50 1 cite
L52 1 S L46 NOT L51 1 cite
L53 0 S L48 AND L52 OR RESOLUTION OR RESOLUTION
L54 1 S L48 NOT L53 1 cite
L55 0 S L54-55 AND L56 = III → IV
L56 0 S L55 NOT L56-58 OR L57-58
L57 2 S L56 NOT L6 2 cites
L58 0 S L58-59-60-61-62-63

L8 = inventors
search
results

FILE 'REGISTRY' ENTERED AT 10: 3:13 ON 23 OCT 2012
158 : S 162307-09-7/RN ← A 10

FILE 'HOCAPLUS' ENTERED AT 16:30:30 ON 26 OCT 1972
13 5 156 13 cites for AC
269839-1a-3/REF#

FILE 'REGISTRY' ENTERED AT 16:39:56 ON 29 OCT 2002
160 1 8 255839-14-C.RN

FILE 'HONOLULU' ENTERED AT 10:54:50 ON 11-11-81

L61	only	S L60	1 cite	
L62	applicatg	S L59 NOT (L45-49 OR L51-54 OR L8)		q:ites
L63		S L61 NOT (L41-44 OR L47-49 OR L51)		no cites

FILE 'CASREACT' ENTERED AT 10:44:12 ON 07/01/02

L64 STR
 L65 2 S L64
 L66 25 S L64 FUL 25 cites for enz or chemical transform.
 SAVE L66 MARSHICHOVA
 L67 4 S L66 AND (BIOLOGICAL OR ENZYM? OR SUBTILISIN OR PROTEASE OR P 4 cites
 for
 eng. rxn

STR for Reg/HCAPLUS

NAME: 10.117.2

=> d que 134

L11 1260 SEA FILE=REGISTRY ABB=ON FLU=ON L12 AND 1 3.11.4/RID
10.117.2

L13

STR

~~4-X~~^B Bond & nodes attached by the bond,
are 'Ring or chain; allows
for bicyclo cpds

← this STR gets all claimed cpds; it's
the starting point for III &
II

NONE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT RLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RINGS, ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L11 1260 SEA FILE=REGISTRY SUB-112 SSS FUL L13

L12 496 SEA FILE=REGISTRY ABB=ON FLU=ON L13 AND 1 3.11.4/RID

L24 117 SEA FILE=REGISTRY ABB=ON FLU=ON L12 AND NRS=1

L29 25 SEA FILE=REGISTRY ABB=ON FLU=ON L28 AND "2-ACABICYCLO[1.1.1]
HEPT-5-EN-3-ONE"

L30 7 SEA FILE=REGISTRY ABB=ON FLU=ON L29 AND "ACETYL"

L34 17 SEA FILE=HCAPLUS ABB=ON FLU=ON L30/RCT

Cas react

CASREACT 1.0.0.0

=> a que 167

LC4 STR

PP"

← looking for any rxn where this
azabicyclo is a reactant.

NAME ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ELEVEL IS LIMITED

NAME ATTRIBUTES:

RINGS ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 4

OTHER ATTRIBUTES: NONE

166 4 SEA FILE=CASREACT 000 FUL L44 166 REACTI IN

167 4 SEA FILE=CASREACT ABB-ON FUL-ON 166 ANT BIOLOGICAL OR
ENZYME OR SUBSTITIN OR PROTEASE OR PROTEINASE OR LIPASE OR
HYDROLASE

Inventor Search results

MARK 12 746,891

and still has hits in it

L10 ANSWER 1 OF 3 HCAPLUS COMMUNI 11.1.1.1

ACCESSION NUMBER: 2001:000000000000
DOCUMENT NUMBER: 100:000000
TITLE: Preparation of optically active azabicycloheptenone derivatives by stereospecific enzymatic synthesis
INVENTOR S : Bernegger-Egli, Christine; Brax, Frank; Roduit, Jean Paul; Werbitzky, Oleg; Guggisberg, Yves
PATENT APPLICANT: Lanza A.-S., Zurich.
AUTHOR: PAT. INO. Appl., 77 pp.
CODEN: IXXXX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 199903032	A1	20000120	WO 1999-EP4814	19990708
W:	AS, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, GR, GU, HK, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, SM, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GB, GR, HE, LE, MG, SI, SL, SE, US, HU, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BG, CH, CS, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AT 1998003	A1	20000301	AT 1998-000000	19980000
EP 1998103	A1	20000301	EP 1998-000000	19980000
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, IL, IN, NL, SE, SI, SK, SL, SM, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
SI 200000000000	TL	20000000	SI 2000-000000	20000000
NO 2001000121	A	20010108	NO 2001-121	20010108
PRIORITY APPLN. INFO.:			EP 1998-112719	A 19980000
			EP 1998-103949	A 19981217
			WO 1999-EP4814	W 19990708
OTHER SOURCE S:		MARKAT 13:100000		

AB:

R1: C

R2: H

II

NHRC

H

III

AB The invention relates to a biotechnol. method for producing optically active compds. of general formulas I and II, wherein R1 represents acyl or acyloxy, and R2 represents H or C1-C10 alkyl, by reaction of the racemic lactam using a **hydrolase** in the presence of a nucleophile and in the presence of a base in a const. pH range. The invention also relates to the subsequent conversion of compd. I into the optically active 1-amino-4-hydroxymethyl-2-cyclopentene of formula (III). Racemic 3-acetyl-2-azabicyclo[2.2.1]hept-5-en-3-one 419.75 mL was dissd. with water 60 mL and a conc. subtilisin soln. 4.1 mL. This soln. was brought to pH 7.5 and incubated at 37°C. for 24 h. with vigorous stirring. After 48 h. (18,48)-2-Acetyl-2-azabicyclo[2.2.1]hept-5-en-3-one with an ee 99% was obtained. Final yield of purified product was 91%.

162307-09-7

RI: RCT (Reactant); RACT (Reactant or reagent)
enzymic resolu. of; prepn. of optically active
azabicycloheptenone derivs. by stereospecific enzymic
hydrolysis)

RN 162307-09-7 HCAPLUS

CN 1-Azabicyclo[2.2.1]hept-5-en-3-one, 2-acetyl- (9CI) (CA INDEX NAME)

H

AB

255839-18-0P

RI: RCT (Reactant); SYN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
enzymic resolu. of; prepn. of optically active
azabicycloheptenone derivs. by stereospecific enzymic
hydrolysis)

RN 255839-18-0P HCAPLUS

CN 1-Azabicyclo[2.2.1]hept-5-en-3-one, 2-acetyl- (9CI) (CA INDEX NAME)

255839-21-5P

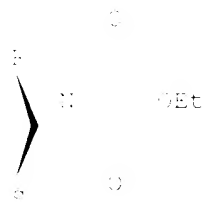
EL: BMF (Bioindustrial manufacture); BIL (Biological study); BKEI (Preparation)

prepn. of optically active **azabicycloheptenone** derivs. by stereospecific enzymic hydrolysis

RN 255839-21-5 HCAPLUS

CN 2-Azabicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-oxo-, ethyl ester, (1S,4S)- (CI) CA INDEX NAME

Absolute stereochemistry.



49805-30-3DP, 2-Azabicyclo[2.2.1]hept-5-ene-3-one, derivs. 112531-51-8DP, 32-13 alky. esters 136522-35-5DP, derivs. 189098-29-1P 200002-40-0P 255839-19-1P

EL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BICL (Biological study); PREP (Preparation)

prepn. of optically active **azabicycloheptenone** derivs. by stereospecific enzymic hydrolysis

RN 49805-30-3 HCAPLUS

CN 2-Azabicyclo[2.2.1]hept-5-ene-3-one (CI) CA INDEX NAME

CH

RN 112531-51-5 HCAPLUS

CN 2-Azabicyclo[2.2.1]hept-5-ene-3-one, 3-oxo-, ethyl ester, (1S,4S)- (CI) CA INDEX NAME

Absolute stereochemistry.

NAME 12 41,241

RN 1-6512-35-8 H2ABLU

CN 2-Cyclopentene-1-carboxylic acid, 4-aminophenyl ester, (1R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

SMILES C1=CC=C(C=C1)C(=O)O[C@H]2C=CC[C@H]2

RN 1-6512-36-3 H2ABLU

CN 2-Azabicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 1-6512-40-0 H2ABLU

CN 2-Azabicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1S,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 1-6512-42-1 H2ABLU

CN 2-Cyclopentene-1-carboxylic acid, 4-acetylamino-, propyl ester, (1R,4R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

SMILES CCOC(=O)C1=CC=C(C=C1)C(=O)N[C@H]2C=CC[C@H]2

1-67-56-1, 2-aminobicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1R,4R)-

1-67-56-2, 2-aminobicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1S,4R)-

1-67-56-3, 2-aminobicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1R,4R)-

1-67-56-4, 2-aminobicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1S,4R)-

1-67-56-5, 2-aminobicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1R,4R)-

1-67-56-6, 2-aminobicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1S,4R)-

1-67-56-7, 2-aminobicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1R,4R)-

1-67-56-8, 2-aminobicyclo[2.2.1]hept-5-en-3-one, 2-acetyl-, (1S,4R)-

stereospecific enzymic hydrolysis

RI 1-62-1 HCAPLUS
 CI 1-62-1 PCI VA INDEX NAME

H₃C OH

RI 1-62-1 HCAPLUS
 CI 1-62-1 PCI VA INDEX NAME

H₃C CH₂ CH₂ OH

RI 1-62-1 HCAPLUS
 CI 1-62-1 PCI VA INDEX NAME

H₃C CH₂ CH₂ CH₂ OH

RI 1-62-1 HCAPLUS
 CI 1-62-1 PCI VA INDEX NAME

0

RI 9001-62-1, Lipase 9001-92-7, Protease
 9014-01-1, Subtilisin 9074-07-1, Proteinase, Aspergillus
 alkaline 37259-58-8, Serine Proteinase 39450-01-6
 RI: SAT (Catalyst used; USES 'Uses'
 'prepn. of optically active azabicycloheptenone derivs. by
 stereospecific enzymic hydrolysis')

RI 901-62-1 HCAPLUS
 CI Lipase, triacylglycerol (PCI, VA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RI 901-62-1 HCAPLUS
 CI Proteinase (PCI, VA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RI 9014-01-1 HCAPLUS
 CI Subtilisin (PCI, VA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RI 9074-07-1 HCAPLUS
 CI Proteinase, Aspergillus alkaline (PCI, VA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RI 37259-58-8 HCAPLUS
 CI Proteinase, Serine (PCI, VA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RI 39450-01-6 HCAPLUS
 CI Proteinase, Serine (PCI, VA INDEX NAME)

Studies 109-99-9, Tetrahydrofuran, biological studies
 RI: BVM Biological use, unclassified; BIL Biological study; VHM
 VLM

prepn. of optically active azabicycloheptenone deriva. by
 stereospecific enzymic hydrolysis

- II 9001-62-1, Lipase 9001-92-7, Proteinase
- 9014-01-1, Schellisin 9074-07-1, Isomerase, Aspartilase
- Aspartilase 37259-58-8, Serine aminohydrolase 39450-01-6

RI: VLM Analytical use; VEM VPM

prepn. of optically active azabicycloheptenone deriva. by
 stereospecific enzymic hydrolysis

- II 255839-20-4P
- RI: SPN Synthetic preparation; KKP Preparation

prepn. of optically active azabicycloheptenone deriva. by
 stereospecific enzymic hydrolysis

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

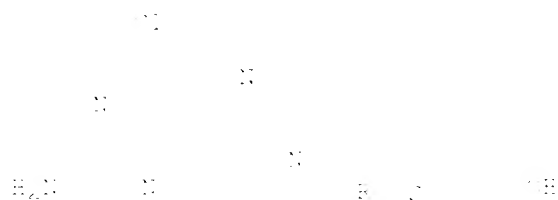
NAME: 168960-19-8P

EL: BMF (Biochemical manufacture); BPN (Biosynthetic preparation); SPN (Synthetic preparation); BIL (Biological study); PREP (Preparation); multistep process for the propr. of (1S,4S)- and (1R,4S)-4-(2-amino-6-chloro-9H-purin-8-yl)-5-cyclopentene-1-methanol.

RM 168960-19-8P HOAPLUS

CM 1-Cyclopentene-1-methanol, 4-(2-amino-6-chloro-9H-purin-8-yl)-, (1S,4S)-
 RCI HOA INDEX NAME

Absolute stereochemistry. Rotation: -.



RM 216481-88-8 HOAPLUS

CM 2-Cyclopentene-1-methanol, 4-(2-amino-6-chloro-9H-purin-8-yl)-, (1R,4S)-
 RCI HOA INDEX NAME

Absolute stereochemistry.



IT 168960-19-8P

EL: BPN (Biosynthetic preparation); FRP (Properties); PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); BIL (Biological study); PREP (Preparation); RACT (Reactant or reagent); multistep process for the propr. of (1S,4S)- and (1R,4S)-4-(2-amino-6-chloro-9H-purin-8-yl)-5-cyclopentene-1-methanol.

RM 168960-19-8P HOAPLUS

CM 1-Cyclopentene-1-methanol, 4-amino-, synthon, (1S,4S)-
 RCI HOA INDEX NAME

Absolute stereochemistry. Rotation: -.



● RM

17 130931-86-1P 168960-18-7P 171887-04-0P
216481-85-5P

SA: SPN (Biosynthetic preparation; cell cultures; film production; recovery); SPN (Synthetic preparation; RPLC; biological study; SARF preparation)

(multistep process for the prepn. of (1R,4S)-amino-

1R,4S)-4-(2-amino-6-chloro-6-H-purin-9-yl)-2-cyclopenten-1-ol-methane.

RN 17431-86-1 HCAPLUS

CN Acetamide, N-[(1R,4S)-4-(hydroxymethyl)-2-cyclopenten-1-yl]- (CA INDEX NAME)

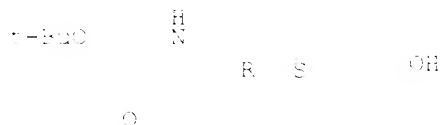
Absolute stereochemistry.



RN 168960-18-7 HCAPLUS

CN Carbamic acid, [(1R,4S)-4-(hydroxymethyl)-2-cyclopenten-1-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

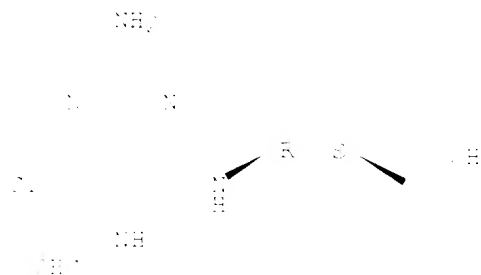
Absolute stereochemistry. Rotation (+).



RN 171887-04-0 HCAPLUS

CN Formamide, N-[(2-amino-4-chloro-6-[(1R,4S)-4-(hydroxymethyl)-2-cyclopenten-1-yl]amino]-5-pyrimidinyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 17431-86-1 HCAPLUS

CN Pyrimidine, N-[(1R,4S)-4-(hydroxymethyl)-2-cyclopenten-1-yl]- (CA INDEX NAME)

Absolute stereochemistry.

MARK 4-1

Process ; Reagent ; Reagent or reagent

multistep process for the prep. of 1d, 1b - 1d, 1b

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

O

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b - 4- (hydroxymethyl)-2-cyclopenten-1-yl]- (HCl) (CA INDEX NAME)

1d, 1b

BN 162307-09-7P HCAPLUS
 CN 1-Azabicyclo[2.2.1]hept-5-en-3-one, 2-acetyl- (CA) INDEX NAME

162307-09-7P NH CH₃ CH

11 9014-06-6
 RI: CAT Catalyst used; USES Uses
 multistep process for the prepn. of 1R,4R- and/or
 1R,4S-4-(2-amino-6-chloro-9-H-purin-4-yl)-5-cyclopentene-1-methanol
 BN 162307-09-7P HCAPLUS
 CN Amidase, penicillin (CI) INDEX NAME

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

11 162307-09-7P 199395-75-0P 199395-76-1P
 199395-77-2P 199395-78-3P 216481-82-2P
 216481-87-7P
 RI: PRP (Properties); PUR (Purification or recovery); RCT (Resistant); SYN
 (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent);
 multistep process for the prepn. of 1R,4R- and/or
 1R,4S-4-(2-amino-6-chloro-9-H-purin-4-yl)-5-cyclopentene-1-methanol
 BN 162307-09-7P HCAPLUS
 CN 1-Azabicyclo[2.2.1]hept-5-en-3-one, 2-acetyl- (CA) INDEX NAME

N
 Ar

BN 162307-09-7P HCAPLUS
 CN 1-Azabicyclo[2.2.1]hept-5-en-3-one, 2-(1-oxobutyl)- (CA) INDEX NAME

162307-09-7P
 N

BN 162307-09-7P HCAPLUS
 CN 1-Azabicyclo[2.2.1]hept-5-en-3-one, 2-phenyl- (CA) INDEX NAME

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971) using a Shimadzu 1010 spectrophotometer. The concentration of chlorophyll was expressed as $\mu\text{g mL}^{-1}$ of the sample.

[illegible]

31

PC 1439A-76-1 HOAPLUS
 1-ADAPLUSYL(2,2,2)TRIS-5-en-1-ene, 2- 1-methyl-1-oxo-1-propyl - 401 17A
 (USED NAME)

1990

1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 26

1-4-1 12 743,391

11 49805-30-3, 1-Azabicyclo[2.2.1]hept-5-en-2-yl
 RI: ECT (Reagent); EAD (Reagent or reagent)
 multistep process for the prep. of (1S,4S) - and/or
 (1R,4S) -4- 2-amino-6-chloro-9-H-purin-9-yl -2-cyclopentene-1-methanol
 RI: 4- 2-amino-6-chloro-9-H-purin-9-yl -2-cyclopentene-1-methanol
 RI: 1-Azabicyclo[2.2.1]hept-5-en-2-yl (1S,4S) INDEX NAME

NR

9

12 ICM 012P017-18
 ICS 012P013-02; 037C233-13; 037C231-18; 047C231-25
 13 012P017-18, 012R001-06; 012P017-18, 012R001-01; 012P 18-1-1, 012P 1-1-1;
 012P017-18, 012R001-07; 012P017-18, 012R001-0-1; 012P 18-1-1, 012R001-11;
 012P017-18, 012R001-1-1
 14 16-2 (Fermentation and Biotechnological Chemistry)
 Section cross-references: 1, 17
 15 stereoselective aminochloropurinyldicyclopentenemethanol synthesis
 16 Rhodococcus
 Rhodococcus
 Rhodococcus erythropolis
 Rhodococcus erythropolis
 multistep process for the prep. of (1S,4S) - and/or
 (1R,4S) -4- 2-amino-6-chloro-9-H-purin-9-yl -2-cyclopentene-1-methanol
 17 9012-56-OP, N-Acetylaminosalicylic acid hydrolase
 RI: BAC (Biological activity or effector, except adverse); ECT (Biological
 study, unclassified); ERP (Properties); FVE (Purification; recovery;
 BIL (Biological study); PREP (Preparation)
 from Rhodococcus erythropolis
 18 136522-33-3P 216481-88-8P
 RI: EWF (Biotechnological manufacture); BIN (Biosynthetic preparation); SPN
 Synthetic preparation; BIL (Biological study); PREP (Preparation)
 multistep process for the prep. of (1S,4S) - and/or
 (1R,4S) -4- 2-amino-6-chloro-9-H-purin-9-yl -2-cyclopentene-1-methanol
 19 168960-19-8P
 RI: BIN (Biosynthetic preparation); EWF (Biotechnological manufacture); FVE (Purification;
 recovery); ECT (Reagent); BIN (Synthetic preparation); BIL (Biological
 study); PREP (Preparation); EAD (Reagent or reagent)
 multistep process for the prep. of (1S,4S) - and/or
 (1R,4S) -4- 2-amino-6-chloro-9-H-purin-9-yl -2-cyclopentene-1-methanol
 20 130931-86-1P 168960-18-7P 171887-04-0P
 216481-85-5P
 RI: BIN (Biosynthetic preparation); EWF (Biotechnological manufacture); FVE (Purification;
 recovery); BIN (Synthetic preparation); BIL (Biological study); PREP
 Preparation
 multistep process for the prep. of (1S,4S) - and/or
 (1R,4S) -4- 2-amino-6-chloro-9-H-purin-9-yl -2-cyclopentene-1-methanol

- IT 136522-35-5P
 RL: BPN (Biosynthetic preparation); RCT (Reactant); SPN (Synthetic preparation); BPN (Biological study); PREP (Preparation); RACT (Reactant or reagent)
 (multistep process for the prepn. of (1S,4R)- and/or (1R,4S)-4-(2-amino-6-chloro-9-H-purin-9-yl)-2-cyclopentene-1-methanol)
- IT 216481-84-4P 216481-86-6P
 RL: BPN (Biosynthetic preparation); SPN (Synthetic preparation); BPN (Biological study); PREP (Preparation)
 (multistep process for the prepn. of (1S,4R)- and/or (1R,4S)-4-(2-amino-6-chloro-9-H-purin-9-yl)-2-cyclopentene-1-methanol)
- IT 199395-80-7P 199395-81-8P 199395-82-9P
 199395-84-1P 199395-85-2P 216481-83-3P
 RL: BPR (Biological process); BSN (Biological study, unclassified); PRP (Properties); PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); BPN (Biological study); PREP (Preparation); BPN (Process); RACT (Reactant or reagent)
 (multistep process for the prepn. of (1S,4R)- and/or (1R,4S)-4-(2-amino-6-chloro-9-H-purin-9-yl)-2-cyclopentene-1-methanol)
- IT 9014-06-6
 RL: CAT (Catalyst used); USES (Uses)
 (multistep process for the prepn. of (1S,4R)- and/or (1R,4S)-4-(2-amino-6-chloro-9-H-purin-9-yl)-2-cyclopentene-1-methanol)
- IT 162307-09-7P 199395-75-0P 199395-76-1P
 199395-77-2P 199395-78-3P 216481-82-2P
 216481-87-7P
 RL: PRP (Properties); PUR (Purification or recovery); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (multistep process for the prepn. of (1S,4R)- and/or (1R,4S)-4-(2-amino-6-chloro-9-H-purin-9-yl)-2-cyclopentene-1-methanol)
- IT 49805-30-3, 2-Azabicyclo[2.2.1]hept-5-en-3-one
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (multistep process for the prepn. of (1S,4R)- and/or (1R,4S)-4-(2-amino-6-chloro-9-H-purin-9-yl)-2-cyclopentene-1-methanol)

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9745529	A1	19971204	WO 1997-EP2836	19970530
W:	AL, AM, AT, AU, AE, BA,		BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,	
	DK, EE, ES, FI, GB, GE,		GR, HU, IL, IS, JP, KE, KG, KI, KR, KZ,	
	LC, LK, LR, LS, LT, LU,		LV, MD, MG, MK, MN, MW, NN, NL, NZ, PL,	
	PT, RO, RU, SI, SE, SG,		SL, SK, TJ, TM, TR, TT, UA, UG, UK, US,	
	VN, YU, ZA, ZI, ZY, ZS,		ZR, ZT, ZV, ZW, ZZ, ZZ, ZZ, ZZ,	
RW:	GH, HE, LS, MM, ON, SE,		CG, AG, BE, BH, BL, BO, BR, BU, BV, BW,	
	CR, IE, IT, LB, MD, NL,		FR, GR, HR, HS, HU, ID, IG, IN, IR, IQ,	
	ML, MR, NE, SN, TD, TG			
CA 1253977	AR	19971204	CA 1997-2238977	19970530
AB 9731735	A1	19980105	AT 1997-31705	19970530
EP 934343	A1	19990331	EP 1997-927092	19970530
R:	AT, BE, CH, DE, DK, ES,		FR, GB, GR, IT, LI, NL, SE, PT, IE, FI	
CN 1220695	A	199900623	CN 1997-195182	19970530
JF 2000512488	T2	20000926	JF 1997-541630	19970530
KR 1000016124	A	20000328	KR 1998-709691	19981128
US 6361111	B1	01-07434	US 1997-194126	19970530

[illegible]

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1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

9012-56-0P, Am. 11380

[illegible]

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[illegible]

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

As a result of the above, the following hypotheses were formulated:

136522-30-0P 136522-35-5P

136522-30-0P 136522-35-5P
 30: BME (Bioindustrial manufacture); BEM (Biotechnological preparation); BHS
 (Synthetic preparation); BION (Biological study); BREF (Preparation)
 (prepn. of amine acids and deriva. thereof from

azabicycloheptenones and microbial metab. of the products,

SECRET

RE 10-6221-10-1 HARRIS
SUB -Chloranthene-1-methanol, 4-anilino-, 1H, 4S, - [C] W. LINDA WALK

MINISTRY OF DEFENSE, NOVEMBER 1954

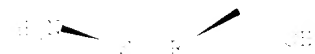


Figure 1. The effect of the concentration of the Ca^{2+} solution on the Ca^{2+} concentration in the Ca^{2+} solution. The Ca^{2+} concentration in the Ca^{2+} solution was 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.0, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 10.0, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.8, 11.9, 12.0, 12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7, 12.8, 12.9, 13.0, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 13.8, 13.9, 14.0, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.7, 14.8, 14.9, 15.0, 15.1, 15.2, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 16.0, 16.1, 16.2, 16.3, 16.4, 16.5, 16.6, 16.7, 16.8, 16.9, 17.0, 17.1, 17.2, 17.3, 17.4, 17.5, 17.6, 17.7, 17.8, 17.9, 18.0, 18.1, 18.2, 18.3, 18.4, 18.5, 18.6, 18.7, 18.8, 18.9, 19.0, 19.1, 19.2, 19.3, 19.4, 19.5, 19.6, 19.7, 19.8, 19.9, 20.0, 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, 20.7, 20.8, 20.9, 21.0, 21.1, 21.2, 21.3, 21.4, 21.5, 21.6, 21.7, 21.8, 21.9, 22.0, 22.1, 22.2, 22.3, 22.4, 22.5, 22.6, 22.7, 22.8, 22.9, 23.0, 23.1, 23.2, 23.3, 23.4, 23.5, 23.6, 23.7, 23.8, 23.9, 24.0, 24.1, 24.2, 24.3, 24.4, 24.5, 24.6, 24.7, 24.8, 24.9, 25.0, 25.1, 25.2, 25.3, 25.4, 25.5, 25.6, 25.7, 25.8, 25.9, 26.0, 26.1, 26.2, 26.3, 26.4, 26.5, 26.6, 26.7, 26.8, 26.9, 27.0, 27.1, 27.2, 27.3, 27.4, 27.5, 27.6, 27.7, 27.8, 27.9, 28.0, 28.1, 28.2, 28.3, 28.4, 28.5, 28.6, 28.7, 28.8, 28.9, 29.0, 29.1, 29.2, 29.3, 29.4, 29.5, 29.6, 29.7, 29.8, 29.9, 30.0, 30.1, 30.2, 30.3, 30.4, 30.5, 30.6, 30.7, 30.8, 30.9, 31.0, 31.1, 31.2, 31.3, 31.4, 31.5, 31.6, 31.7, 31.8, 31.9, 32.0, 32.1, 32.2, 32.3, 32.4, 32.5, 32.6, 32.7, 32.8, 32.9, 33.0, 33.1, 33.2, 33.3, 33.4, 33.5, 33.6, 33.7, 33.8, 33.9, 34.0, 34.1, 34.2, 34.3, 34.4, 34.5, 34.6, 34.7, 34.8, 34.9, 35.0, 35.1, 35.2, 35.3, 35.4, 35.5, 35.6, 35.7, 35.8, 35.9, 36.0, 36.1, 36.2, 36.3, 36.4, 36.5, 36.6, 36.7, 36.8, 36.9, 37.0, 37.1, 37.2, 37.3, 37.4, 37.5, 37.6, 37.7, 37.8, 37.9, 38.0, 38.1, 38.2, 38.3, 38.4, 38.5, 38.6, 38.7, 38.8, 38.9, 39.0, 39.1, 39.2, 39.3, 39.4, 39.5, 39.6, 39.7, 39.8, 39.9, 40.0, 40.1, 40.2, 40.3, 40.4, 40.5, 40.6, 40.7, 40.8, 40.9, 41.0, 41.1, 41.2, 41.3, 41.4, 41.5, 41.6, 41.7, 41.8, 41.9, 42.0, 42.1, 42.2, 42.3, 42.4, 42.5, 42.6, 42.7, 42.8, 42.9, 43.0, 43.1, 43.2, 43.3, 43.4, 43.5, 43.6, 43.7, 43.8, 43.9, 44.0, 44.1, 44.2, 44.3, 44.4, 44.5, 44.6, 44.7, 44.8, 44.9, 45.0, 45.1, 45.2, 45.3, 45.4, 45.5, 45.6, 45.7, 45.8, 45.9, 46.0, 46.1, 46.2, 46.3, 46.4, 46.5, 46.6, 46.7, 46.8, 46.9, 47.0, 47.1, 47.2, 47.3, 47.4, 47.5, 47.6, 47.7, 47.8, 47.9, 48.0, 48.1, 48.2, 48.3, 48.4, 48.5, 48.6, 48.7, 48.8, 48.9, 49.0, 49.1, 49.2, 49.3, 49.4, 49.5, 49.6, 49.7, 49.8, 49.9, 50.0, 50.1, 50.2, 50.3, 50.4, 50.5, 50.6, 50.7, 50.8, 50.9, 51.0, 51.1, 51.2, 51.3, 51.4, 51.5, 51.6, 51.7, 51.8, 51.9, 52.0, 52.1, 52.2, 52.3, 52.4, 52.5, 52.6, 52.7, 52.8, 52.9, 53.0, 53.1, 53.2, 53.3, 53.4, 53.5, 53.6, 53.7, 53.8, 53.9, 54.0, 54.1, 54.2, 54.3, 54.4, 54.5, 54.6, 54.7, 54.8, 54.9, 55.0, 55.1, 55.2, 55.3, 55.4, 55.5, 55.6, 55.7, 55.8, 55.9, 56.0, 56.1, 56.2, 56.3, 56.4, 56.5, 56.6, 56.7, 56.8, 56.9, 57.0, 57.1, 57.2, 57.3, 57.4, 57.5, 57.6, 57.7, 57.8, 57.9, 58.0, 58.1, 58.2, 58.3, 58.4, 58.5, 58.6, 58.7, 58.8, 58.9, 59.0, 59.1, 59.2, 59.3, 59.4, 59.5, 59.6, 59.7, 59.8, 59.9, 60.0, 60.1, 60.2, 60.3, 60.4, 60.5, 60.6, 60.7, 60.8, 60.9, 61.0, 61.1, 61.2, 61.3, 61.4, 61.5, 61.6, 61.7, 61.8, 61.9, 62.0, 62.1, 62.2, 62.3, 62.4, 62.5, 62.6, 62.7, 62.8, 62.9, 63.0, 63.1, 63.2, 63.3, 63.4, 63.5, 63.6, 63.7, 63.8, 63.9, 64.0, 64.1, 64.2, 64.3, 64.4, 64.5, 64.6, 64.7, 64.8, 64.9, 65.0, 65.1, 65.2, 65.3, 65.4, 65.5, 65.6, 65.7, 65.8, 65.9, 66.0, 66.1, 66.2, 66.3, 66.4, 66.5, 66.6, 66.7, 66.8, 66.9, 67.0, 67.1, 67.2, 67.3, 67.4, 67.5, 67.6, 67.7, 67.8, 67.9, 68.0, 68.1, 68.2, 68.3, 68.4

[illegible]

the same stereochemistry. Rotation: 10^3 .

199395-80-7P 199395-81-8P 199395-82-9P

199395-83-0P 199395-84-1P 199395-85-2P

[illegible]

azabicycloheptenones

[illegible]

IT 9015-68-3, Asparaginase
 RI: CAT (Catalytic rate); CAT (Catalytic rate)
 (prepn. of amino acids and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)
 RI 10-68-3 HCAPLUS
 TN Asparaginase (10, 10) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 49805-30-3, 2-Azabicyclo[2.2.1]hept-5-en-3-one
 RI: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of amino acids and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)
 RN 4-805-30-3 HCAPLUS
 TN 2-Azabicyclo[2.2.1]hept-5-en-3-one (R01) (CA INDEX NAME)

NR

R

IT 162307-09-7P 199395-75-0P 199395-76-1P
 199395-77-2P 199395-78-3P 199395-79-4P
 RI: RCT (Reactant); SYN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (prepn. of amino acids and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)
 RN 162307-09-7 HCAPLUS
 TN 2-Azabicyclo[2.2.1]hept-5-en-3-one, 3-acetyl- (R01) (CA INDEX NAME)

R

Ac

RN 199395-75-0 HCAPLUS
 TN 2-Azabicyclo[2.2.1]hept-5-en-3-one, 3-(1-oxopropyl)- (R01) (CA INDEX NAME)

1-oxopropyl

R

RN 199395-76-1 HCAPLUS
 TN 2-Azabicyclo[2.2.1]hept-5-en-3-one, 3-(1-oxopropyl)- (R01) (CA INDEX NAME)

of N-acetylaminocals. hydrolase

- IT Agrobacterium
Azobacterium xylosoxidans
Azobacterium
Bacillus simplex
Fermentation
Leuconostoc
Rhodococcus
Rhodococcus erythropolis
(prepn. of amino alcs. and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)
- 11 9012-56-0P, Amidase
RI: BAC (Biological activity or extract, except enzyme; B.C. Biol. Chem. occurrence); BSU (Biological study, unclassified); CAT (Catalyst use); PI (Properties); PUR (Purification or recovery); BIOL (Biological study); BCC (Occurrence); PREP (Preparation); USES (Uses)
(prepn. of amino alcs. and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)
- 11 136522-30-0P 136522-35-5P
RI: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. of amino alcs. and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)
- IT 199395-80-7P 199395-81-8P 199395-82-9P
199395-83-0P 199395-84-1P 199395-85-2P
RI: BPR (Biological process); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(prepn. of amino alcs. and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)
- IT 9015-68-3, Asparaginase
RI: CAT (Catalyst use); USES (Uses)
(prepn. of amino alcs. and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)
- IT 49805-30-3, 2-Azabicyclo[2.2.1]hept-5-en-3-one
RI: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of amino alcs. and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)
- IT 162307-09-7P 199395-75-0P 199395-76-1P
199395-77-2P 199395-78-3P 199395-79-4P
RI: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. of amino alcs. and derivs. thereof from
azabicycloheptenones and microbial metab. of the products)

1. 1990年12月15日，在《人民日报》发表署名文章《中国要警惕“新左派”的泛滥》，指出“新左派”泛滥的根源是“对社会主义的误解”。

1. 2000年12月15日，在北京市举行的“2000年中国城市竞争力论坛”上，中国城市竞争力研究会发布了《2000年中国城市竞争力报告》。

[illegible][illegible]

1997年12月15日

^a χ^2 = 1.03, df = 1, p = .31. ^b χ^2 = 1.03, df = 1, p = .31. ^c χ^2 = 1.03, df = 1, p = .31. ^d χ^2 = 1.03, df = 1, p = .31. ^e χ^2 = 1.03, df = 1, p = .31. ^f χ^2 = 1.03, df = 1, p = .31. ^g χ^2 = 1.03, df = 1, p = .31. ^h χ^2 = 1.03, df = 1, p = .31. ⁱ χ^2 = 1.03, df = 1, p = .31. ^j χ^2 = 1.03, df = 1, p = .31. ^k χ^2 = 1.03, df = 1, p = .31. ^l χ^2 = 1.03, df = 1, p = .31. ^m χ^2 = 1.03, df = 1, p = .31. ⁿ χ^2 = 1.03, df = 1, p = .31. ^o χ^2 = 1.03, df = 1, p = .31. ^p χ^2 = 1.03, df = 1, p = .31. ^q χ^2 = 1.03, df = 1, p = .31. ^r χ^2 = 1.03, df = 1, p = .31. ^s χ^2 = 1.03, df = 1, p = .31. ^t χ^2 = 1.03, df = 1, p = .31. ^u χ^2 = 1.03, df = 1, p = .31. ^v χ^2 = 1.03, df = 1, p = .31. ^w χ^2 = 1.03, df = 1, p = .31. ^x χ^2 = 1.03, df = 1, p = .31. ^y χ^2 = 1.03, df = 1, p = .31. ^z χ^2 = 1.03, df = 1, p = .31.

Table 1. *Continued*

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The *Agrobacterium* strains were incubated in the presence of 100 mg/ml of rifampicin and 100 mg/ml of tetracycline. The concentration of the *Agrobacterium* suspension was 10⁶ cells/ml. The transformation efficiency was determined by the number of transformants per 10⁶ cells. The data are the mean ± SD of three independent experiments.

• **W**

② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿

1. *Journal of the American Medical Association*, 1997; 277: 1033-1037.

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28 The lipase-catalyzed asym. rescin. of 2-azabicyclo[2.2.1]hept-5-en-3-one was reported. Non-racemic chiral 2-azabicyclo[2.2.1]hept-5-en-3-ones were obtained conveniently by lipase-catalyzed enantioselective transesterification or hydrolysis of 6-(hydroxymethyl)-2-azabicyclo[2.2.1]hept-5-en-3-one or 2-(acetoxy methyl)-2-azabicyclo[2.2.1]hept-5-en-3-one. The rescin. of (R)-2-(hydroxymethyl)-2-azabicyclo[2.2.1]hept-5-en-3-one (1) gave (R)-2-(acetoxy methyl)-2-azabicyclo[2.2.1]hept-5-en-3-one which was hydrolyzed to give (R)-2-(hydroxymethyl)-2-azabicyclo[2.2.1]hept-5-en-3-one. Ring opening of the latter gave (R)-4-oxo-4-(2-oxocyclopent-1-en-1-yl)-pentanoic acid Me ester (2), which is an intermediate for carbonyl.

157732-11-1P 183074-62-6P

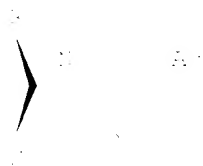
EC: RCT (Reactant); SYN (Synthetic Preparation); NMR

(Preparation); RAST (Resistant or resistant)

1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808

1997-1998 = 1997-1998 = 1997-1998

^a Values are means ± SD.



1. *Journal of the American Medical Association*, 1997; 277: 1039-1043.

127061-46-5P

127061-46-5P, 12-en-4- Acetylamin-1-yl-pentene-1-yl-oxyl
and methyl ester
SI: SYN (Synthesis; preparation; PREP (Preparation)
lipase-catalyzed resolin. of 2-azabicyclo[2.2.1]hept-6-en-3-one
SI: 127061-46-5P HOABINP
SI: 12-pentene-1-carboxylic acid, 4- acetylamin-, methyl ester,
SI: 127061-46-5P (CA INDEX NAME)

Relative stereochemistry.

ASNN F S G

127061-46-5P

127061-46-5P, 12-en-4- Acetylamin-1-yl-pentene-1-yl-oxyl
and methyl ester
SI: SYN (Synthesis; preparation; PREP (Preparation)
lipase-catalyzed resolin. of 2-azabicyclo[2.2.1]hept-6-en-3-one
SI: 127061-46-5P HOABINP
SI: 12-pentene-1-carboxylic acid, 4- acetylamin-, methyl ester,
SI: 127061-46-5P (CA INDEX NAME)

Resolution

(abs., lipase-catalyzed resolin. of 2-azabicyclo[2.2.1]hept-6-en-3-one)

Resolution

(enzymic, lipase-catalyzed resolin. of 2-azabicyclo[2.2.1]hept-6-en-3-one)

127061-46-5P, Lipase

SI: RCT (Reactant); USNS (Uses)

lipase-catalyzed resolin. of 2-azabicyclo[2.2.1]hept-6-en-3-one

127061-46-5P, 2-Azabicyclo[2.2.1]hept-6-en-3-one

SI: RCT (Reactant); RAST (Reactant or Reagent)

lipase-catalyzed resolin. of 2-azabicyclo[2.2.1]hept-6-en-3-one

127061-46-5P, 2-Azabicyclo[2.2.1]hept-6-en-3-one

127061-46-5P, 2-Azabicyclo[2.2.1]hept-6-en-3-one

157732-11-1P (127061-46-5P) 183074-62-6P

SI: RCT (Reactant); SYN (Synthesis; preparation; PREP (Preparation)
lipase-catalyzed resolin. of 2-azabicyclo[2.2.1]hept-6-en-3-one

127061-46-5P, 2-Azabicyclo[2.2.1]hept-6-en-3-one

127061-46-5P, 2-Azabicyclo[2.2.1]hept-6-en-3-one

SI: RCT (Reactant); SYN (Synthesis; preparation; PREP (Preparation)
lipase-catalyzed resolin. of 2-azabicyclo[2.2.1]hept-6-en-3-one

the 1990s, the number of people in the world who are illiterate has increased from 1.2 billion to 1.5 billion. The number of illiterate people in the world is expected to increase to 1.7 billion by the year 2015. The number of illiterate people in the world is expected to increase to 1.7 billion by the year 2015.

•

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100

$$f = \frac{1}{\pi} \int_{-\infty}^{\infty} \hat{f}(k) e^{ikx} dk$$
[illegible]

162307-09-7

[illegible]

RCT (Reactant); RT (Reaction Time); T₀ (Time at which the reaction starts); T_f (Time at which the reaction ends); T_m (Time at which the maximum concentration of the product is reached); T_p (Time at which the product is present in the solution); T_r (Time at which the reactant is present in the solution); T_s (Time at which the system reaches equilibrium); T_t (Time at which the temperature of the system is constant).

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1997). The concentration of *Chlorophyll a* and *Chlorophyll b* was expressed in $\mu\text{g mL}^{-1}$ of the sample.

TABLE 1. *Crustacean community structure: N-sampled species*

107-19-1 HOSKELLS

W 1-ANADICYCLOIS[2.2.1]HEPT-5-EN-3-ONE, 4-ACETYL- (C11H16O3) (A) (ENTER NAME)

1

10

100-103-228041-0

FOI 012P013-7; 012P014-52

10-16-2 (Fermentation and Bioindustrial Chemistry)

ST lactam azabicycloheptenone resin subtilisin

IV Resolution (separation)

biol.; presq. en entier rempli d'écrits à la main.

IR 179.30-56-92P, N-protected

[illegible]

THEORY OF THE PROPAGATION

SUBSTRATE SPECIFICITY OF THE N-DEHYDROXYLASE

168960-18-7P

AC: BEN (Biosynthetic Preparation); B101 (Biological Study); PREP

(Preparation)

prepd. enantiomerically enriched N-dehydrated lactams

157-55-95

U.S. DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS, WASHINGTON, D.C. 20540

Exponential; BIC; Information; AIC; Preparation; BIC; Model; BIC; Percent

creed, and it is important that we have a clear understanding of the

162307-09-7 162307-09-8

[illegible]

RCT (Reactant); RCT = Reactant; RCT = Reactant; RCT = Reactant

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Lichtenthaler and Whistler (1973).

2000年12月29日，在“2000年中国最佳企业公民”颁奖典礼上，中国工商银行荣获“2000年中国最佳企业公民”称号。

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: the control group and the experimental group. The control group was divided into two subgroups: the control group and the control group. The experimental group was divided into two subgroups: the experimental group and the experimental group. The control group was divided into two subgroups: the control group and the control group. The experimental group was divided into two subgroups: the experimental group and the experimental group.

[illegible]

PROPR. EN INTELLEKTUELELY OMRÅDE: N-101342204 1977-03-01

1. The first step is to identify the variables that are being measured. In this case, the variables are the number of people who attended the event and the number of people who did not attend.

[illegible][illegible]

ACCESSION NUMBER: 100-1034-100000

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1. *Chlorophyll a* (Chl *a*)

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard training program, while the experimental group received a training program with a focus on the specific skills required for the task. The results of the training program were compared between the two groups.

... ..









the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion. The number of people aged 65 and over is expected to increase from 200 million to 400 million. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion.

姓名	性别	年龄	职业	住址	联系电话
张三	男	35	教师	北京市朝阳区	13800138000
李四	女	28	医生	北京市海淀区	13900139000
王五	男	42	工程师	上海市浦东新区	13600136000
赵六	女	31	公务员	广东省广州市	13500135000
孙七	男	25	学生	浙江省杭州市	13400134000
周八	女	38	经理	江苏省南京市	13300133000
吴九	男	45	农民	河南省郑州市	13200132000
郑十	女	22	护士	四川省成都市	13100131000
冯十一	男	33	律师	北京市西城区	13000130000
陈十二	女	27	会计	山东省济南市	12900129000
林十三	男	36	作家	湖南省长沙市	12800128000
周十四	女	29	设计师	安徽省合肥市	12700127000
吴十五	男	41	科学家	福建省厦门市	12600126000
郑十六	女	34	记者	江西省南昌市	12500125000
冯十七	男	26	程序员	湖北省武汉市	12400124000
陈十八	女	39	教授	陕西省西安市	12300123000
林十九	男	43	企业家	辽宁省沈阳市	12200122000
周二十	女	32	歌手	贵州省贵阳市	12100121000
吴二十一	男	24	画家	云南省昆明市	12000120000
郑二十二	女	37	翻译	广西壮族自治区南宁市	11900119000
冯二十三	男	40	厨师	海南省海口市	11800118000
陈二十四	女	23	模特	广东省深圳市	11700117000
林二十五	男	30	运动员	北京市东城区	11600116000
周二十六	女	35	心理咨询师	江苏省苏州市	11500115000
吴二十七	男	44	历史学家	浙江省宁波市	11400114000
郑二十八	女	21	舞蹈家	安徽省芜湖市	11300113000
冯二十九	男	38	生物学家	福建省福州市	11200112000
陈三十	女	25	天文学家	江西省景德镇市	11100111000
林三十一	男	46	地质学家	湖北省武汉市	11000110000
周三十二	女	29	环境学家	陕西省西安市	10900109000
吴三十三	男	33	气象学家	辽宁省沈阳市	10800108000
郑三十四	女	36	海洋学家	贵州省贵阳市	10700107000
冯三十五	男	27	天文学家	云南省昆明市	10600106000
陈三十六	女	41	生物学家	广西壮族自治区南宁市	10500105000
林三十七	男	24	地质学家	海南省海口市	10400104000
周三十八	女	39	环境学家	广东省深圳市	10300103000
吴三十九	男	43	气象学家	北京市东城区	10200102000
郑四十	女	32	海洋学家	江苏省苏州市	10100101000
冯四十一	男	26	天文学家	浙江省宁波市	10000100000
陈四十二	女	37	生物学家	安徽省芜湖市	99900999000
林四十三	男	40	地质学家	福建省福州市	99800998000
周四十四	女	21	环境学家	江西省景德镇市	99700997000
吴四十五	男	38	气象学家	湖北省武汉市	99600996000
郑四十六	女	25	天文学家	陕西省西安市	99500995000
冯四十七	男	46	生物学家	辽宁省沈阳市	99400994000
陈四十八	女	29	地质学家	贵州省贵阳市	99300993000
林四十九	男	33	环境学家	云南省昆明市	99200992000
周五十	女	36	气象学家	广西壮族自治区南宁市	99100991000
吴五十一	男	27	海洋学家	海南省海口市	99000990000
郑五十二	女	41	天文学家	广东省深圳市	98900989000
冯五十三	男	24	生物学家	北京市东城区	98800988000
陈五十四	女	39	地质学家	江苏省苏州市	98700987000
林五十五	男	43	环境学家	浙江省宁波市	98600986000
周五十六	女	32	气象学家	安徽省芜湖市	98500985000
吴五十七	男	26	天文学家	福建省福州市	98400984000
郑五十八	女	37	生物学家	江西省景德镇市	98300983000
冯五十九	男	40	地质学家	湖北省武汉市	98200982000
陈六十	女	21	环境学家	陕西省西安市	98100981000
林六十一	男	38	气象学家	辽宁省沈阳市	98000980000
周六十二	女	25	海洋学家	贵州省贵阳市	97900979000
吴六十三	男	46	天文学家	云南省昆明市	97800978000
郑六十四	女	29	生物学家	广西壮族自治区南宁市	97700977000
冯六十五	男	33	地质学家	海南省海口市	97600976000
陈六十六	女	36	环境学家	广东省深圳市	9750097500

$\frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx = \frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx$

[illegible][illegible]

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The *Agrobacterium* strains were grown in the YEA medium for 24 h at 28 °C. The cell concentration of the *Agrobacterium* strains was adjusted to 10⁸ cells/ml. The *Agrobacterium* strains were then mixed with the plant cells and cocultured for 48 h. The transformation efficiency was determined by the number of transformants per 10⁶ cells. The data were the mean ± SD of three independent experiments.

100

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

1. *Phragmites australis* (Cav.) Trin. ex Steud. (Common reed)

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WERNER, JACOB; 1824: 122-123

Year	Age	Gender	Occupation	Education	Income	Health	Family	Community	Environment	Policy	Impact
2010	18-24	Male	Student	High School	\$10,000	Good	2	Low	High	Low	Low
2010	25-34	Female	Teacher	College	\$20,000	Good	3	Medium	Medium	Medium	Medium
2010	35-44	Male	Engineer	University	\$30,000	Good	4	High	Low	High	High
2010	45-54	Female	Nurse	College	\$25,000	Good	3	Medium	Medium	Medium	Medium
2010	55-64	Male	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	65-74	Female	Homemaker	High School	\$10,000	Good	2	Low	High	Low	Low
2010	75+	Male	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	18-24	Female	Student	High School	\$10,000	Good	2	Low	High	Low	Low
2010	25-34	Male	Teacher	College	\$20,000	Good	3	Medium	Medium	Medium	Medium
2010	35-44	Female	Engineer	University	\$30,000	Good	4	High	Low	High	High
2010	45-54	Male	Nurse	College	\$25,000	Good	3	Medium	Medium	Medium	Medium
2010	55-64	Female	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	65-74	Male	Homemaker	High School	\$10,000	Good	2	Low	High	Low	Low
2010	75+	Female	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	18-24	Male	Student	High School	\$10,000	Good	2	Low	High	Low	Low
2010	25-34	Female	Teacher	College	\$20,000	Good	3	Medium	Medium	Medium	Medium
2010	35-44	Male	Engineer	University	\$30,000	Good	4	High	Low	High	High
2010	45-54	Female	Nurse	College	\$25,000	Good	3	Medium	Medium	Medium	Medium
2010	55-64	Male	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	65-74	Female	Homemaker	High School	\$10,000	Good	2	Low	High	Low	Low
2010	75+	Male	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	18-24	Female	Student	High School	\$10,000	Good	2	Low	High	Low	Low
2010	25-34	Male	Teacher	College	\$20,000	Good	3	Medium	Medium	Medium	Medium
2010	35-44	Female	Engineer	University	\$30,000	Good	4	High	Low	High	High
2010	45-54	Male	Nurse	College	\$25,000	Good	3	Medium	Medium	Medium	Medium
2010	55-64	Female	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	65-74	Male	Homemaker	High School	\$10,000	Good	2	Low	High	Low	Low
2010	75+	Female	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	18-24	Male	Student	High School	\$10,000	Good	2	Low	High	Low	Low
2010	25-34	Female	Teacher	College	\$20,000	Good	3	Medium	Medium	Medium	Medium
2010	35-44	Male	Engineer	University	\$30,000	Good	4	High	Low	High	High
2010	45-54	Female	Nurse	College	\$25,000	Good	3	Medium	Medium	Medium	Medium
2010	55-64	Male	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	65-74	Female	Homemaker	High School	\$10,000	Good	2	Low	High	Low	Low
2010	75+	Male	Retired	High School	\$15,000	Good	2	Low	High	Low	Low
2010	18-24	Female	Student	High School	\$10,000	Good	2	Low	High	Low	Low
2010	25-34	Male	Teacher	College	\$20,000	Good	3	Medium	Medium	Medium	Medium
2010	35-44	Female	Engineer	University	\$30,000	Good	4	High	Low	High	High
2010	45-54	Male	Nurse	College	\$						

American Society for Humanism

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[illegible]

1992

ACKNOWLEDGMENTS

English

Several glycinamide ribonucleotide analogs have been prepd. and evaluated as substrates and/or inhibitors of glycinamide ribonucleotide transformylase from chicken liver. The side chain modified analogs, in which the glycine side chain, $R = \text{CH}_2\text{NH}_2$, has been replaced by $R = \text{CH}_2\text{NHCH}_3$ and $R = \text{CH}_2\text{CH}_2\text{NH}_2$, are substrates, with V_{M} relative intensities of 3.4 and 16.3, resp. Several carbocyclic analogs of glycinamide ribonucleotide, including the phosphonate deriv. of carbocyclic glycinamide ribonucleotide, did not serve as substrates, but were inhibitors of the **enzyme**, competitive against glycinamide ribonucleotide, with K_i values ranging from 7.4 to 23.6 times the K_m for glycinamide ribonucleotide. However, the O-phosphonate analog of carbocyclic glycinamide ribonucleotide did support **enzymic** activity, with V_{M} (relative intensity) of 1.0. In addn., glycinamide ribonucleoside was neither a substrate nor, nor an inhibitor of, glycinamide ribonucleotide transformylase. Furthermore, α -glycinamide ribonucleotide had no effect on **enzyme** activity. These studies have begun to define the structural features of the nucleotide substrate required to support **enzymic** activity.

127061-46-5

RT: RCT (Reactant); RPT: Reactant or Product

substrate and inhibitor specificity of *Aspergillus fumigatus* transformationase from chicken liver

RM 100-46-0 HONOLULU

NAME - 4-pentenoic acid, 4-phenylamide -, methyl ester,
methyl- 4-pentenoate
INSTRUMENT NAME

[illegible]

100

136522-35-5P

DATE: 11/11/2011 ; TIME: 11:11:11 ; PREP

(Preparation);

11 127061-46-5 RCT:R

12 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

13 127061-46-5 RCT:R 127061-46-5 RCT:R

14 127061-46-5 RCT:R

15 127061-46-5 RCT:R

16 127061-46-5 RCT:R 127061-46-5 RCT:R

17 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

18 127061-46-5 RCT:R

19 127061-46-5 RCT:R

20 127061-46-5 RCT:R

21 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

22 127061-46-5 RCT:R 127061-46-5 RCT:R

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24 127061-46-5 RCT:R

25 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

26 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

27 127061-46-5 RCT:R

28 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

29 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

30 127061-46-5 RCT:R 127061-46-5 RCT:R

31 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

32 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

33 127061-46-5 RCT:R 127061-46-5 RCT:R

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42 127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

127061-46-5

127061-46-5 RCT:R 127061-46-5 RCT:R

127061-46-5 RCT:R 127061-46-5 RCT:R 127061-46-5 RCT:R

transaminase from chicken liver

11 14-11-11 136522-35-5P 14-11-11-11 14-11-11-11
14-11-11-11 14-11-11-11 14-11-11-11 14-11-11-11 14-11-11-11
14-11-11-11 14-11-11-11 14-11-11-11

12: 14-11-11-11 ; 14-11-11-11 ; PREP

(Preparation): 14-11-11-11 ; 14-11-11-11

Substrate and product : specificity of 14-11-11-11 ; 14-11-11-11

transaminase from chicken liver

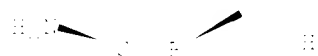
11 14-11-11-11 14-11-11-11

12: 14-11-11-11 ; 14-11-11-11 ; 14-11-11-11

Substrate and product : specificity of 14-11-11-11 ; 14-11-11-11

transaminase from chicken liver

[illegible]
$$\frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix} \frac{1}{\sqrt{2}} \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix} = \frac{1}{2} \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix} \begin{pmatrix} 1 & 1 \\ 1 & -1 \end{pmatrix} = \frac{1}{2} \begin{pmatrix} 2 & 0 \\ 0 & 2 \end{pmatrix} = \begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix} = I$$
[illegible]



PM 1-141-1-1 H VALU

TM 2-Cyclopentene-1-methanol, 4-amino-, (1S,4R) - (4S) CA INDEX NAME

Absolute stereochemistry. Rotation 1-1.



PM 1-141-1-1 H VALU

TM 2-Cyclopentene-1-methanol, 4-amino-, (1S,4R) - (4S) CA INDEX NAME



PM 1-141-1-1 H VALU

TM 2-Cyclopentene-1-methanol, 4-amino-, (1S,4R) -, (2S,3R) -, 2,3-dihydroxybutanedioate (1:1) salt, (4S) CA INDEX NAME

PM 1

PM 1-141-1-1 H VALU

TM 2-Cyclopentene-1-methanol, 4-amino-, (1S,4R) - (4S) CA INDEX NAME

Absolute stereochemistry. Rotation 1-1.



PM 1

PM 1-141-1-1 H VALU

TM 2-Cyclopentene-1-methanol, 4-amino-, (1S,4R) - (4S) CA INDEX NAME

Absolute stereochemistry.

PM 1

PM 1-141-1-1 H VALU

TM 2-Cyclopentene-1-methanol, 4-amino-, (1S,4R) - (4S) CA INDEX NAME

PM 1

PM 1-141-1-1 H VALU

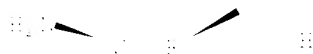
NAME 2-13,14

UN 2-Cyclopentene-1-methanol, 4-amino-, (1R,4R)-, (2S,3S)-3,3-dihydroxybutanedioate [1:1] (salt) (Cl) (CA INDEX NAME)

UN 1

RM 140512-31-
CMF 06 H11 N 0

Absolute stereochemistry. Rotation.

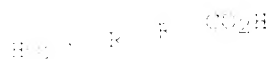


UN 1

RM 87-09-4
CMF 04 H6 O6

Absolute stereochemistry.

OH



OH

RM 220177-52-0 HCAPLUS

UN 2-Cyclopentene-1-methanol, 4-amino-, (1R,4R)-, (2S,3S)-3,3-dihydroxybutanedioate [1:1] (salt) (Cl) (CA INDEX NAME)

UN 1

RM 140512-31-
CMF 06 H11 N 0

Absolute stereochemistry. Rotation.



UN

RM 14-01-
CMF 04 H6 O6

Absolute stereochemistry.



162307-09-7

RI: RCT (Reactant); RACT (Reactant or reagent)

prepn. of 4-amino-2-cyclopentenemethanol enantiomers as drug intermediates

RI: 162307-09-7 RACT

RI: 4-Aminocyclopent-2-en-1-ol, 2-acetyl- 421. 162307-09-7 INDEX NAME.

16

As

162307-09-7

RI: 162307-09-7; 162307-09-7; 162307-09-7; 162307-09-7

RI: 4-Aminocyclopent-2-en-1-ol, 2-acetyl- 421. 162307-09-7

RI: 4-Aminocyclopent-2-en-1-ol, 2-acetyl- 421. 162307-09-7

RI: Alcohols, preparation

RI: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

chiral, amino; prepn. of 4-amino-2-cyclopentenemethanol enantiomers as drug intermediates

162307-09-7 162307-09-7 162307-09-7

RI: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

prepn. of 4-amino-2-cyclopentenemethanol enantiomers as drug intermediates

162307-09-7 162307-09-7 162307-09-7 162307-09-7

162307-09-7 162307-09-7 162307-09-7 162307-09-7

229177-39-3P 229177-46-2P 229177-49-5P

229177-52-0P

RI: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

prepn. of 4-amino-2-cyclopentenemethanol enantiomers as drug intermediates

162307-09-7 162307-09-7 162307-09-7 162307-09-7

162307-09-7 162307-09-7 162307-09-7 162307-09-7

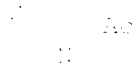
RI: RCT (Reactant); RACT (Reactant or reagent)

prepn. of 4-amino-2-cyclopentenemethanol enantiomers as drug intermediates

1. 1412 105 1120 113 1

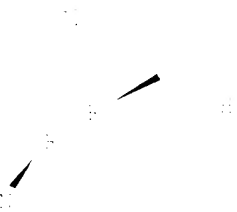
1. 1412 105 1120 113 1
 AUTHOR: F. H. WARR, J. WARR, J. WARR
 ADDRESS: 1412 105 1120 113 1
 DOCUMENT NUMBER: 1412 105 1120 113 1
 TITLE: Stereoselectivity in addition of phenylselenenyl chloride to bicyclo[2.2.1]hept-2-ene derivatives and synthesis of 3'-chloro substituted carboxir
 AUTHOR: F. H. WARR, J. WARR, J. WARR
 DATE: 1412 105 1120 113 1
 SOURCE: 1412 105 1120 113 1
 PUBLISHER: 1412 105 1120 113 1
 DOCUMENT TYPE: 1412 105 1120 113 1
 LANGUAGE: 1412 105 1120 113 1
 SOURCE: 1412 105 1120 113 1
 AB: Addn. of phenylselenenyl chloride to bicyclo[2.2.1]hept-2-ene derivatives and the stereoselectivities have been identified. The addn. of phenylselenenyl chloride to bicyclo[2.2.1]hept-2-ene-3-one having an electron-withdrawing group at 2-position were converted to 3'-chloro substituted carboxir.
 IT 200002-40-0
 RI: RCT (Reactant); RCT (Reactant or reagent)
 (stereoselective addn. of phenylselenenyl chloride to bicycloheptene
 series, and prepn. of chloro-substituted carboxir
 RN 200002-40-0 HCAPLUS
 IN 2-Asubicyclo[2.2.1]hept-1-en-3-one, 2-acety-, 10,14 - 1412 105 1120 113 1
 NAME)

Absolute stereochemistry.



IT 200002-44-4P
 RI: RCT (Reactant); RCT (Reactant or reagent); PREP
 (Preparation); RCT (Reactant or reagent)
 (stereoselective addn. of phenylselenenyl chloride to bicycloheptene
 series, and prepn. of chloro-substituted carboxir
 RN 200002-44-4 HCAPLUS
 IN 2-Asubicyclo[2.2.1]hept-1-en-3-one, 2-acety-, 10,14 - 1412 105 1120 113 1
 NAME)

Absolute stereochemistry.

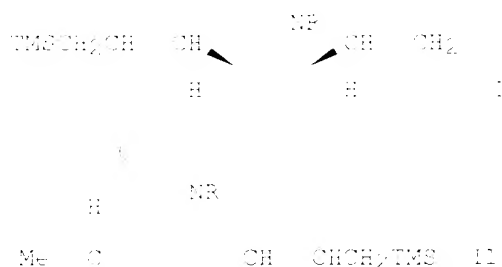


[illegible]

100 101 abs nitro 102 1-3

L62 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 1992 ACT

ACCESSION NUMBER: 162307-09-7 HCAPLUS
 DOCUMENT NUMBER: 162307-09-7
 TITLE: Ruthenium-catalyzed ring-opening cross-metathesis reaction of 2-acabicyclo[2.2.1]hept-3-en-3-ene
 AUTHOR S.: Ishikawa, Minoru; Saigo, Kazuo; Hino, Ayako
 DATE DATE SOURCE: Faculty of Pharmaceutical Sciences, Heiwa University
 UNIVERSITY: Heiwa University, Heiwa, Chiba, Japan
 JOURNAL: HETEROCYCLES, 1992, 45, 111-116
 PUBLISHER: Japan Institute of Heterocyclic Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 11



AB An examn. of the ring-opening cross-metathesis reaction of 2-acabicyclo[2.2.1]hept-3-en-3-ene (ABH) with allyltrimethylsilane in the presence of Grubbs' catalyst showed that a pair of regioisomeric products I (R = Boc) and II (R = Boc) could be isolated instead of the known regioselective formation of I (R = Boc).

162307-09-7

AB: RCT (Reactant); RACT (Reactant or reagent)
 Ruthenium-catalyzed ring-opening cross-metathesis reaction of 2-acabicyclo[2.2.1]hept-3-en-3-ene
 AC 162307-09-7 HCAPLUS
 CN 2-Acabicyclo[2.2.1]hept-3-en-3-ene, 1-allyl-, (R)- Y INDEX NAME

RESEARCH NOTE: THERE ARE NO RESEARCH NOTE AVAILABLE FOR THIS DOCUMENT. NO CITATION IS AVAILABLE FOR THIS DOCUMENT.

162307-09-7 HCAPLUS COPYRIGHT 1992 ACT
 ACCESSION NUMBER: 162307-09-7 HCAPLUS
 DOCUMENT NUMBER: 162307-09-7
 TITLE: Ruthenium-catalyzed ring-opening cross-metathesis reaction of 2-acabicyclo[2.2.1]hept-3-en-3-ene
 AUTHOR S.: Ishikawa, Minoru; Saigo, Kazuo; Hino, Ayako
 DATE DATE SOURCE: Faculty of Pharmaceutical Sciences, Heiwa University
 UNIVERSITY: Heiwa University, Heiwa, Chiba, Japan
 JOURNAL: HETEROCYCLES, 1992, 45, 111-116
 PUBLISHER: Japan Institute of Heterocyclic Chemistry
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 11

4. *Conclusions*

PATENT NO.	REV.	DATE	APPLICATION NO.	DATE
SI 111111	A	1999-01-01	SI 1998-111111	1998-11-24
SI 111111	A1	1999-01-01		
SI 111111	A2	1999-01-01		
SI 111111	A3	1999-01-01		
SI 111111	A4	1999-01-01		
SI 111111	A5	1999-01-01		
SI 111111	A6	1999-01-01		
SI 111111	A7	1999-01-01		
SI 111111	A8	1999-01-01		
SI 111111	A9	1999-01-01		
SI 111111	A10	1999-01-01		
SI 111111	A11	1999-01-01		
SI 111111	A12	1999-01-01		
SI 111111	A13	1999-01-01		
SI 111111	A14	1999-01-01		
SI 111111	A15	1999-01-01		
SI 111111	A16	1999-01-01		
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SI 111111	A22	1999-01-01		
SI 111111	A23	1999-01-01		
SI 111111	A24	1999-01-01		
SI 111111	A25	1999-01-01		
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SI 111111	A50	1999-01-01		
SI 111111	A51	1999-01-01		
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SI 111111	A71	1999-01-01		
SI 111111	A72	1999-01-01		
SI 111111	A73	1999-01-01		
SI 111111	A74	1999-01-01		
SI 111111	A75	1999-01-01		
SI 111111	A76	1999-01-01		
SI 111111	A77	1999-01-01		
SI 111111	A78	1999-01-01		
SI 111111	A79	1999-01-01		
SI 111111	A80	1999-01-01		
SI 111111	A81	1999-01-01		
SI 11				

PRIORITY APPLN. INFO.:	CH 1997-2789	A	19971127
	CH 1997-2781	A	19971113
	CH 1998-183	A	19970121
	CH 1998-185	A	19970327
	EE 1998-118899	A	19981007
	EE 1998-198467	A	19981124

HR Title compds. were prepd. by metal hydride redn. of 2-substituted-2,2,1,1-tetra-5-en-3-one.

162307-09-7

RL: RCT (Reactant); ROST (Reactant or reagent)
 {repr. of 4-mim-2-oxo-pentenemethyl derivatives as diol
 intermediates

Figure 1. Schematic representation of the experimental design. The subjects were divided into two groups: the control group and the experimental group. The control group received a standard diet and water, while the experimental group received a diet supplemented with 0.5% of the active ingredient. The subjects were then divided into two subgroups: the control subgroup and the experimental subgroup. The control subgroup received a standard diet and water, while the experimental subgroup received a diet supplemented with 0.5% of the active ingredient. The subjects were then divided into two subgroups: the control subgroup and the experimental subgroup. The control subgroup received a standard diet and water, while the experimental subgroup received a diet supplemented with 0.5% of the active ingredient.

$$\frac{\partial \mathcal{L}}{\partial \mathbf{w}_1} = \frac{\partial \mathcal{L}}{\partial \mathbf{z}_1} \frac{\partial \mathbf{z}_1}{\partial \mathbf{w}_1} = \frac{\partial \mathcal{L}}{\partial \mathbf{z}_1} \mathbf{1} = \frac{\partial \mathcal{L}}{\partial \mathbf{z}_1} \quad \frac{\partial \mathcal{L}}{\partial \mathbf{w}_2} = \frac{\partial \mathcal{L}}{\partial \mathbf{z}_2} \frac{\partial \mathbf{z}_2}{\partial \mathbf{w}_2} = \frac{\partial \mathcal{L}}{\partial \mathbf{z}_2} \mathbf{1} = \frac{\partial \mathcal{L}}{\partial \mathbf{z}_2} \quad \frac{\partial \mathcal{L}}{\partial \mathbf{w}_3} = \frac{\partial \mathcal{L}}{\partial \mathbf{z}_3} \frac{\partial \mathbf{z}_3}{\partial \mathbf{w}_3} = \frac{\partial \mathcal{L}}{\partial \mathbf{z}_3} \mathbf{1} = \frac{\partial \mathcal{L}}{\partial \mathbf{z}_3}$$

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Year	Number of cases	Number of deaths	Number of cases per 100,000 population	Number of deaths per 100,000 population
1990	1,000	100	1.0	0.1
1991	1,100	110	1.1	0.11
1992	1,200	120	1.2	0.12
1993	1,300	130	1.3	0.13
1994	1,400	140	1.4	0.14
1995	1,500	150	1.5	0.15
1996	1,600	160	1.6	0.16
1997	1,700	170	1.7	0.17
1998	1,800	180	1.8	0.18
1999	1,900	190	1.9	0.19
2000	2,000	200	2.0	0.20
2001	2,100	210	2.1	0.21
2002	2,200	220	2.2	0.22
2003	2,300	230	2.3	0.23
2004	2,400	240	2.4	0.24
2005	2,500	250	2.5	0.25
2006	2,600	260	2.6	0.26
2007	2,700	270	2.7	0.27
2008	2,800	280	2.8	0.28
2009	2,900	290	2.9	0.29
2010	3,000	300	3.0	0.30
2011	3,100	310	3.1	0.31
2012	3,200	320	3.2	0.32
2013	3,300	330	3.3	0.33
2014	3,400	340	3.4	0.34
2015	3,500	350	3.5	0.35
2016	3,600	360	3.6	0.36
2017	3,700	370	3.7	0.37
2018	3,800	380	3.8	0.38
2019	3,900	390	3.9	0.39
2020	4,000	400	4.0	0.40

[illegible][illegible]
$$N = \frac{1}{\sqrt{\pi}} e^{-x^2} \left(-\frac{x}{2} + \frac{1}{2} x^3 - \frac{1}{8} x^5 + \frac{1}{24} x^7 - \frac{1}{640} x^9 + \dots \right)$$

1. *Phylogenetic relationships*—The phylogenetic relationships among the 10 species of *Phrynosoma* were determined using the parsimony method of Felsenstein (1985) as implemented in the computer program PHYLIS (Felsenstein, 1988). The parsimony method was chosen because of the lack of a priori knowledge of the evolutionary relationships among the species of *Phrynosoma*. The parsimony method is the most commonly used method for determining phylogenetic relationships among species (Felsenstein, 1985). The parsimony method was chosen because of the lack of a priori knowledge of the evolutionary relationships among the species of *Phrynosoma*. The parsimony method is the most commonly used method for determining phylogenetic relationships among species (Felsenstein, 1985).

Figure 1. The effect of the number of trials on the number of correct responses. The number of correct responses was significantly higher than the number of incorrect responses in all cases. The number of correct responses was significantly higher than the number of incorrect responses in all cases. The number of correct responses was significantly higher than the number of incorrect responses in all cases.

Figure 1. (a) Schematic diagram of the experimental setup. (b) Schematic diagram of the experimental setup. (c) Schematic diagram of the experimental setup. (d) Schematic diagram of the experimental setup.

AB A simple and efficient process for the enantioselective resolu- 1
N-substituted L-arabicyclo[2.2.1]hept-5-en-3-ones has been developed using
mol. available catalytic enzymes. This offers a practical approach to
the synth. of enantiomerically pure N-substituted L-arabicyclo[2.2.1]hept-5-en-3-ones.

162307-09-7P

EN: ECT Reagent ; EN: Synthesis preparation ; EN: Reagent ; EN: Reagent or Reagent

Synthetic procedure for resolu- 1 N-substituted L-arabicyclo[2.2.1]hept-5-en-3-ones

EN 1-Substituted L-arabicyclo[2.2.1]hept-5-en-3-ones

EN 1-Substituted L-arabicyclo[2.2.1]hept-5-en-3-ones, enantiomerically pure

1

A

REFERENCE COUNT: 10 THERE ARE 10 OTHER REFERENCES AVAILABLE FOR THIS
PAPER. ALL CITATION AVAILABLE IN THE AB FORMAT

LOC ANSWER 4 OF 9 HOAPUS COPYRIGHT 2011 ACS

ACCESSION NUMBER: 1998:149816 HOAPUS

DOCUMENT NUMBER: 129:149166

TITLE: .alpha.-Fluorination of o-phenylsulfinyl-L-
arabicyclo[2.2.1]heptan-3-one and synthesis of
2'-fluoro substituted carbocvir

AUTHOR(S): Toyota, Akemi; Nishimura, Akiko; Kaneko, Chikara

CORPORATE SOURCE: Pharmaceutical Institute, Tohoku University, Sendai,
980-8578, Japan.

SOURCE: Tetrahedron Letters 1997, 38(10), 4077-4080

ISSN: 0040-4039; ISSN: 0040-4039

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): ABSTRACT 129:149166

AB Fluorination of phenylsulfinyl bicycloamide using mol. fluorine proceeded
preferentially with inversion of the carbon atom having the sulfinyl group
to afford .alpha.-fluorinated sulfinyl bicycloamide in fair yield. The
fluorinated sulfinyl bicycloamide was converted to 2'-fluoro substituted
carbocvir via reductive desulfinylation.

162307-09-7

EN: ECT Reagent ; EN: Reagent or Reagent

.alpha.-Fluorination of phenylsulfinyl bicycloamide and
synthesis of 2'-fluoro substituted carbocvir

EN 1-Substituted L-arabicyclo[2.2.1]hept-5-en-3-ones

EN 1-Substituted L-arabicyclo[2.2.1]hept-5-en-3-ones, enantiomerically pure

1

A

REFERENCE COUNT: 10 THERE ARE 10 OTHER REFERENCES AVAILABLE FOR THIS
PAPER. ALL CITATION AVAILABLE IN THE AB FORMAT

1. OWNER OF PATENT: HANSON, COPYRIGHT 1974
 APPLICATION NUMBER: 10010001 HANSON
 DOCUMENT NUMBER: 10010001
 TITLE: Preparation of bicyclic amides and nucleosides for
 cyclophosphamide
 INVENTOR: Hanson, Philip
 PATENT ASSIGNMENT: Hanson, Philip, Japan
 ADDRESS: 10010001 Hanson, Philip, Japan
 INVENTOR TYPE: Hanson
 INVENTOR: Hanson
 FAMILY AND COMM. NAME: Hanson
 PATENT INFORMATION:

PATENT NO.	FILE DATE	APPLICATION NO.	DATE
10010001	10010001	10010001	10010001
OTHER PATENT NO.:	10010001		

C

H

P

I

AB Bicyclic amides (R = aryl, alkyl, cycloalkyl), useful as intermediates for
 cyclophosphamide (antiviral agent), etc., are prep. Epoxides of
 1-acetyl-2-azabicyclo[2.2.1]hept-5-en-3-one with m-chloroperoxybenzoic acid
 are used. (R = Ar).
 CI 162307-09-7P
 RI: RCT (Resistant); SYN (Synthetic preparation); PREP (Preparation); RACT
 (Resistant or resistant)
 RN: repr. of bicyclic amides as intermediates for carbocyclic nucleosides
 CN: 10010001-09-7 HANSON
 CN: 1-Azabicyclo[2.2.1]hept-5-en-3-one, 1-acetyl- (R = Ar) INDEX NAME

H

AC

1. OWNER OF PATENT: HANSON, COPYRIGHT 1974
 APPLICATION NUMBER: 10010001 HANSON
 DOCUMENT NUMBER: 10010001
 TITLE: Preparation of bicyclic amides and nucleosides for
 cyclophosphamide
 INVENTOR: Hanson, Philip
 PATENT ASSIGNMENT: Hanson, Philip, Japan
 ADDRESS: 10010001 Hanson, Philip, Japan
 INVENTOR TYPE: Hanson
 INVENTOR: Hanson
 FAMILY AND COMM. NAME: Hanson
 PATENT INFORMATION:

11

A1

11. AMURA, S. I.; HIRAIWA, T. YUICHI, S. A. I.
 ABSTRACT NUMBER: 162307-09-7
 DOCUMENT NUMBER: 162307-09-7
 TITLE: Synthesis of nucleosides and related compounds. 11. Addition of molecular chlorine to 2-azabicyclo[2.2.1]hept-5-ene and related compounds: synthesis of chlorinated carbonyl nucleosides
 AUTHOR S.: Toyota, Akemi; Aizawa, Megumi; Hatanaka, Chie; Matsubara, Nobuya; Kaneko, Shikara
 CORPORATE SOURCE: Pharm. Inst., Tohoku Univ., Sendai, 980, Japan
 SOURCE: Tetrahedron 1993, 51(12), 3333-3340
 PUBLISHER: Elsevier
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 124:92x7
 11

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12. AMURA, S. I.; HIRAIWA, T. YUICHI, S. A. I.
 ABSTRACT NUMBER: 162307-09-7
 DOCUMENT NUMBER: 162307-09-7
 TITLE: Synthesis of nucleosides and related compounds. 12. Addition of molecular chlorine to 2-azabicyclo[2.2.1]hept-5-ene and related compounds: synthesis of chlorinated carbonyl nucleosides
 AUTHOR S.: Toyota, Akemi; Aizawa, Megumi; Hatanaka, Chie; Matsubara, Nobuya; Kaneko, Shikara
 CORPORATE SOURCE: Pharm. Inst., Tohoku Univ., Sendai, 980, Japan
 SOURCE: Tetrahedron 1993, 51(12), 3333-3340
 PUBLISHER: Elsevier
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 124:92x7
 12

162307-09-7

13. AMURA, S. I.; HIRAIWA, T. YUICHI, S. A. I.

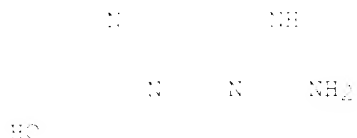
ABSTRACT NUMBER: 162307-09-7
 DOCUMENT NUMBER: 162307-09-7
 TITLE: Synthesis of nucleosides and related compounds. 13. Addition of molecular chlorine to 2-azabicyclo[2.2.1]hept-5-ene and related compounds: synthesis of chlorinated carbonyl nucleosides

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1. ANSWER : OF 4
 ATENTION NUMBER: 145:40726 HCAPLUC
 DOCUMENT NUMBER: 145:40726
 TITLE: Synthesis of nucleotides and related compounds.
 Addition of molecular side chain to nucleosides, nucleotides and
 one derivatives and conversion to nucleoside-nucleotides
 carbocyclic nucleosides
 AUTHOR(S): Toyota, Akemi; Habauchi, Chie; Kikuchi, Masaya;
 Nakano, Chikara
 CORPORATE SOURCE: Pharmaceutical Institute, Tohoku University, Sendai,
 980, Japan.
 SOURCE: Tetrahedron Letters 1984, 25(31), 5665-8
 CODEN: TELEAY; ISSN: 0040-4039
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 GI



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 11
 12

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162307-09-7

[illegible]
$$A_1 = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}, \quad A_2 = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}, \quad A_3 = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$$

11

12

** mark assigned

1.67 ANSWER 1 OF 4 CASREACT ***

APPLICATION NUMBER: 10/11/91
 TITLE: Process for preparing...
 INVENTOR S: Lawson, Michael John; Macdonald, Kenneth; Wallace, Christopher John
 PATENT ASSIGNEE: Glaxo Group Limited, UK
 ADDRESS: 100, Ave., ...
 COUNTRY: ENGLAND
 INVENTOR TYPE: Patent
 LANGUAGE: English
 FAMILY APP. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	FILED DATE	APPL. NO. DATE
W 100017	A1 1990-01-04	W 100017-EP 1990-01-04
W:	AL, AM, AN, AO, AP, AR, AS, AT, AU, AV, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BX, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DC, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LL, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ	
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R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, HU, IT, JP, KR, NL, NO, PL, PT, SE, SI, SK, TR, US, YU, ZA	
BB 100407	A 1998-01-01	BB 100407-980101 1998-01-01
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SE 9840387	B1 1998-01-01	SE 9840387-980101 1998-01-01
PRIORITY APPLN. INFO.:		GB 1997-17908 19970822 WO 1998-EP8291 19980820

OTHER SOURCE(S): MARKPAT 130:108877
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04 The present invention relates to a process for the production of substantially enantiomerically pure intermediates of formula (I), wherein R is an aryl group and X is a leaving group, in which the intermediates are used in the synthesis of a cyclic **enzyme** derivative having a ...

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INVENTOR(S): KASPERAT, MAYBRIGHT, ...
 APPLICATION NUMBER: 11111111 KASPERAT
 TITLE: Process for the preparation of amino alcohols and derivatives thereof
 INVENTOR(S): Bernegger-Egli, Christine; Birn, Ilse M.; Bossard, Pierre; Briener, Walter; Bruck, Frank; Burdador, Knut; Lus, Laurent; Ritter, Kay-Jürgen; Lüscher, Ines; Jucker, Martin; Urban, Eva Maria
 PATENT ASSIGNEE(S): Lonza A.-G., Swiss; Bernegger-Egli, Christine; Birn, Ilse M.; Bossard, Pierre; Briener, Walter; Bruck, Frank; Burdador, Knut; Lus, Laurent
 SOURCE: PCT Int. Appl., 10 pp.
 DOCNO: 111111
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
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WO 9748529	A1	19971214	WO 1997-EP2437	19970510
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CO, DE, DK, EE, ES, FI, GB, GE, GR, HC, IL, IS, JP, KE, KG, KP, KR, KZ, LG, LR, LS, LU, LV, LY, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KS, KD, MD, RU, TN, TM KW: GH, KE, LS, MW, SD, SO, UG, AT, BF, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
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K: AT, BE, BR, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, SE, SI, SK, FI				
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PRIORITY APPLN. INFO.:

OTHER SOURCES : MARPAT 11111111
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PATENT NO.		REV.	DATE	APPLICATION NO.		DATE
WO 9703053		A1	19970131	WO 1996-021179		19960710
W:	AL, AM, AN, AO, AP, AS, BB, BE, BF, BY, CA, CN, DE, DK, EE, EG, FI, FR, GE, GR, IL, IN, JP, KR, KS, KP, LB, LI, LU, LT, LV, MC, MD, ME, MG, MN, MO, MP, MR, MU, MV, MY, NZ, PE, PG, PH, PL, PT, QA, RO, RU, SA, SE, SG, SI, SK, SL, SM, SN, SR, ST, SV, SW, SY, TD, TH, TJ, TM, TN, TR, TT, UA, UG, UK, US, UZ, VC, VE, VI, VN, YU, ZA, ZM, ZW					
BW:	KE, LG, MW, NI, PL, RU, SI, SE, SH, SL, SN, ST, SV, SW, SY, TD, TH, TJ, TM, TN, TR, TT, UA, UG, UK, US, UZ, VC, VE, VI, VN, YU, ZA, ZM, ZW					
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PRIORITY APPL. INFO.:				US 1496-409869		19960710
				WO 1996-021179		19960710

OTHER SOURCE(S): MARPAT 126:183941

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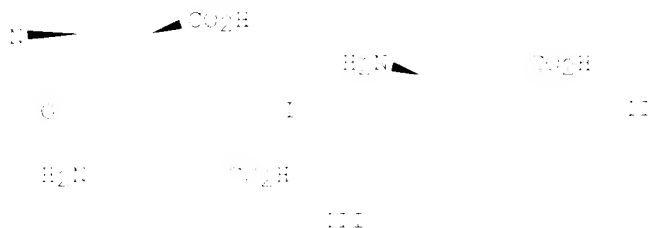
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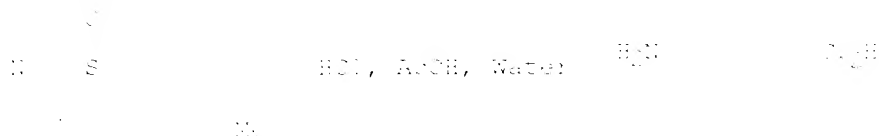
1-10,11 and 11,12

ABSTRACT: 1-10,11 and 11,12
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 AUTHOR: 1-10,11 and 11,12
 JOURNAL: 1-10,11 and 11,12
 VOLUME: 1-10,11 and 11,12
 NUMBER: 1-10,11 and 11,12
 YEAR: 1-10,11 and 11,12
 MONTH: 1-10,11 and 11,12
 DAY: 1-10,11 and 11,12
 PAGE: 1-10,11 and 11,12
 LANGUAGE: 1-10,11 and 11,12
 ABSTRACT: 1-10,11 and 11,12



ABSTRACT: A series of cyclopentane and cyclopentane analogs of GABA were prepared utilizing a thermal cis-trans isomerization of the phthalimide. The trans-aminocyclopentenecarboxylic acid II is the key step in the synthesis of GABA analogs, in particular (+)-GABA and (-)-GABA. The trans-aminocyclopentenecarboxylic acid III was achieved by crystallization of the propylidene-protected esters or lactone esters of the phthalimide-protected intermediates.

EXTRACT: 1-10,11



ABSTRACT: Australian Journal of Chemistry, 1964, 17, 1-10, 11, 12

1-10,11

ABSTRACT: 1-10,11 and 11,12
 TITLE: 1-10,11 and 11,12
 AUTHOR: 1-10,11 and 11,12
 JOURNAL: 1-10,11 and 11,12
 VOLUME: 1-10,11 and 11,12
 NUMBER: 1-10,11 and 11,12
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 LANGUAGE: 1-10,11 and 11,12
 ABSTRACT: 1-10,11 and 11,12

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